

APPLICATION OF FENG SHUI PRINCIPLES TO MAJOR CITIES IN THE WORLD

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SUMMARY

Feng Shui is the Chinese wisdom that has accumulated more than three thousand years' knowledge and experience in built environment. The primitive knowledge of Feng Shui based on observations of astronomical, natural and human phenomena. The developed theory and practice of Feng Shui can be classified into two categories, Form School and Compass School. Form School has been well recognised that it comprises the scientific base to analyze the built environment. It is based on the understanding of the physical configuration of geographical features. These principles are applied from macro to micro built environment; from site selection and design of cities to dwellings. These principles are not only applied in China and Asian countries, examples from major cities in the world are also found. This paper explores the theory and practice of the Form School and examines how the top twenty of the most densely populated major cities in the world conformed to these principles.

INTRODUCTION

Feng Shui is an ancient Chinese wisdom related to architecture and built environment. It is still a very popular practice in China, Asia and western countries as well, such as America, British and Australia. The primitive knowledge of Feng Shui based on the observation of three sources: astronomical phenomena, natural phenomena and human behaviour (Feuchtwang, 1974:104). These sources developed into Chinese astronomy, geography and philosophy that combined into the vast knowledge of Feng Shui. The philosophical base of Feng Shui is to achieve the harmonisation amongst heaven, earth and human by providing the equilibrium amongst of nature, building and people. It interprets the environment so that people can live more in harmony within the surroundings. The context of Feng Shui covers the entire range of built environment from town planning to interior design (Mak, 1995). This paper explores the theory and practice of Feng Shui, in particular referred to Form School and the ideal Feng Shui model. A survey is conducted to demonstrate how the location of the most densely populated major cities in the world conformed to these principles.

TWO SCHOOLS

There are basically two main schools of thought and practice in Feng Shui: the Compass school and Form school. The Compass school is based on the

metaphysical speculations of the cosmology originated from *I Ching* (Book of Exchange). In particular, this school analyses the directional aspects of the given site in term of the relationships amongst the Five Elements, Eight Trigrams, Heavenly Stems, Earthly Branches and Constellations (Lee, 1986 : 159). The Compass school based primarily on the use of the *Luopan* (Feng Shui compass) and composed elements of time in space. Direct reference to various astrological and other symbols was important and the practice was highly formulaic.

The Form school is concerned with the physical form of the site under consideration and its surrounding environment. The practice of Form School first observes the land formation and terrain, and then determines location and orientation. The Form School put less emphasis on the compass and cosmic symbology and instead concentrated on the analysis of sites, seeing the shapes and imaginability of the landforms as of primary importance (Mills, 1992:161). Its analysis based on the five geographical factors, namely dragon, sand, water, cave and direction (Lip, 1979:29).

Form school has been well recognised and widely accepted that it comprises the scientific bases in the analysis of built environment (Ching & Hung 1993; He 1990; Wang 1992). Recent research by Mills (1992) investigated the spiritual landscapes of burial mound sites in the Upper Mississippi river basin and Feng Shui practice in tomb siting in particular reference to Form School. The results suggested

that there were many similarities even through they come from a very different cultural background. Xu (1990) compared the Feng Shui using Form School approach and the Hendler model, a well-known western model in site analysis. The result indicated that Feng Shui has proved to be a more powerful tool in site analysis than the Hendler model.

BASIC CONCEPTS

The origin of Form School led to ancient times. The first surviving important written source is a manual called the Book of Burial, written by *Guo Pu* (276-324) in *Jin* Dynasty (276-420). *Guo Pu* is recognised as the founder of the Feng Shui we know today. There are five main concepts from the Book of Burial: *Qi* theory, Wind-water theory, Four Emblems theory, Form theory and Direction theory (He, 1990:31-32). The term "Feng Shui" (means Wind and Water in Chinese) was originated from this book.

The theoretical basis of Feng Shui relies on the concept of *Qi*. It is a special Chinese term and is a very important concept for understanding Feng Shui. *Qi* is described as the cosmic spirit that vitalizes and infuses all things, giving energy to human being, life to nature, movement to water and growth to plants (Skinner, 1989 : 17). It is difficult to find equivalent English word for *Qi*. It is usually translated as breath of life (Skinner, 1989:17), vital force (Lee, 1986:17), breath of nature or vital energy (Xu, 1990 :23). *Qi* is categorized into "living *Qi*" and "dead *Qi*". Warm and moving, living *Qi* infuses life with energy; while dead *Qi* is cold and still, making life end. Traditionally, Chinese believed that *Qi* presence on earth is linked with geographical features. Based on this concept of *Qi*, the Book of Burial established the wind-water theory and provided the definition of Feng Shui:

Qi will disperse by wind and bound by water. When ancients tried to accumulate Qi, they will not disperse it; and when they tried to move Qi, they will bound it. Therefore this practice is called Feng Shui (wind and water).

It concludes that the concept of accumulation of *Qi* is an essential condition for a good location. In order to accumulate *Qi* in practice, it will depend on two major criteria: bound by water and not to disperse by wind. It is why the term "Feng Shui" (which are the Chinese pronunciations of Wind and Water) became the most colloquial name for the practice.

The origins of Four Emblems theory came from the historical development of Chinese astronomy. Twenty-eight *Xiu* (Mansions) have been applied to identify twenty-eight unevenly sized minor constellations by which the sky is divided. The identification of the mansions was first made about 2400 B.C. and traditionally they formed a rough belt round the equator (Skinner, 1989:87). These twenty-eight mansions have been grouped into four emblems. Each emblem contained seven mansions according to their shapes and directions in the sky. They were named the Azure Dragon, Red Bird (or Phoenix), White Tiger and Black Tortoise (or Turtle) that represented East, South, West and North according to their directions in the sky.

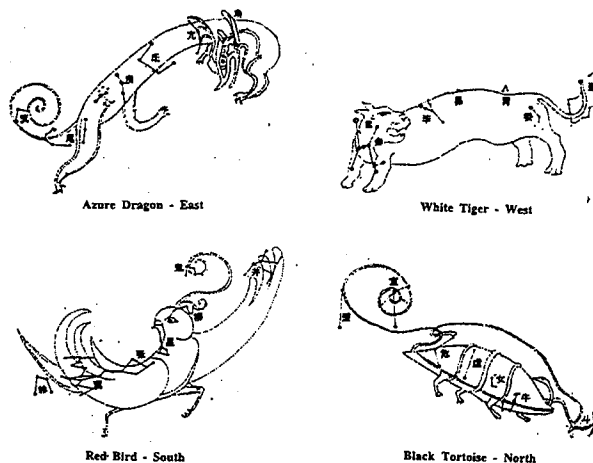


Figure 1 Four emblems : Azure Dragon, Red Bird, White Tiger and Black Tortoise represented the four groups of constellations of the East, South, West and North directions in the sky.

FIVE GEOGRAPHICAL FACTORS

Form school is based on the verification of the physical configuration of mountains and watercourses surrounding the site. It is also called Shapes School or Intuitive School. It flourished in the provinces of *Kiangsi* and *Anhui*. This school is said to have derived from the teachings of *Yang Junsong* of the late *Tang* Dynasty (618-907). Its theory is based on the understanding of the landscape : the profiles of the land, the sources of rivers, the terrain, etc. *Yang Junsong* wrote many famous books on Feng Shui, such as *Han Long Jing* (Classic of Moving Dragons). He developed the common methodology of the Form School, which focused on the shape of mountains and hills, the direction of water and the relationship between hills and water (Xu, 1990:5). Its analysis based on the five geographical factors, namely dragon, sand, water, cave and direction :

1. Dragon : or called "Dragon Vein", means the mountain ridges and represents the topography.
2. Sand : means the enfolding hills and represents the surrounding environment.
3. Water : means the flow of water through or by-passing the site, and represents the hydrology.
4. Cave : or called "Feng Shui Spot", means the niche and represents the best location.
5. Direction : means the orientation of the site and building, and represents the climatology.

Dragon

In the Form School, the mountains are of the first order of consideration. Mountain ridges are referred to as "Dragons". The first step in selecting a promising site is to find the "true dragon vein". It means a mountain ridge which begins at the peak, called the peak of ancestor, and then forms a long range that displays at least three major mountains, called the mountain of forefather, great grandfather and grandfather. (Xu, 1990:51-52). The dragon, or the mountain ridge ends at the hill of parents, and descent to the location of "Cave". The higher the peak and the longer the ridge will be favourable.

Sand

"Sand" means the surrounding hills that protect the "Cave" from strong wind. It used the four emblems theory to characterise the surrounding environment. The ideal "Cave" is described as the protective "armchair" hill formation with the Azure Dragon on the left, White Tiger on the right, and Black Tortoise at the back. The Red Bird is located in the front of the "Cave" and "Ming-Tang". "Red Bird" is further classified into two kinds : Front Hill (or called Table Hill) and Facing Mountain. Table Hill is small in shape and close to the Cave, while Facing Mountain is higher, bigger and farther away.

Direction

The ideal "Direction" of the dwelling is faced to the South. In the practice of Form School, the four cardinal directions of east, west, south and north are correspondingly referred to as left, right, front and back. Rather than referring to the orientation of the dwelling in terms of the four cardinal directions, the terms left, right, front and back are used (Lee, 1986:181). In combination of the four emblems, the building facing South will be described as "Red Bird in the front", "Azure Dragon on the left", "White Tiger on the right" and "Black Tortoise at the back".

Water

"Water" means the flow of water through or by-passing the site. Water is the most preferable feature in the practice of Form School. The "Water Dragon Classic" is a Feng Shui manual devoted to the interpretation of flow of water and to be found in the Imperial encyclopedia in AD 600. It recommended to have water on the South is good and the watercourse should be calm and smooth; not be fast or straight.

Cave

The consideration of the best location of a site, called "Cave" is most important and is the final goal of the Feng Shui practice. The ideal "Cave" should compile with all the features of "Dragon", "Sand", "Water", "Cave" and "Direction". The Feng Shui texts often describe the ideal site as "mountain ridge protectingly runs around the site with watercourse embraces in a smooth curve" (Lee, 1986:177).

Besides the five geographical factors, "Ming-Tang" (called Bright Court or Open Court) formed an important part of the Feng Shui situation. It is described as the open space in front of the "Cave" and enclosed by the four emblems features of the "Sand". There are further classifications of "Inner Bright Court" that is enfolded by Table Hill and "Outer Bright Court" is enclosed by Facing Mountain.

Feng Shui Model

Anderson & Anderson (1973: 50) agreed the Feng Shui model of Form School "is basically a very practical system whereby village is situated such that it does not take up farmland or lay itself open to floods and typhoons....based on sound pragmatism". The "Dragon" features ensure the sites are on elevated spots. The formation of "Sand" with surrounding hills protect the "Cave" from strong wind. The "Water" features of flow streams provides a constant clean water supply. "Direction" examines correct solar access and "Bright Court" facilitates farmland in front of the village.

The ideal model from the Form School has been interpreted into graphics in the ancient Feng Shui text as Figure 2. Ching & Hung (1993:24) reproduced it into a simple 3-D sketch as shown in Figure 3. These pictures explain the relationships between the key elements considered and integrated into an ideal Feng Shui model.

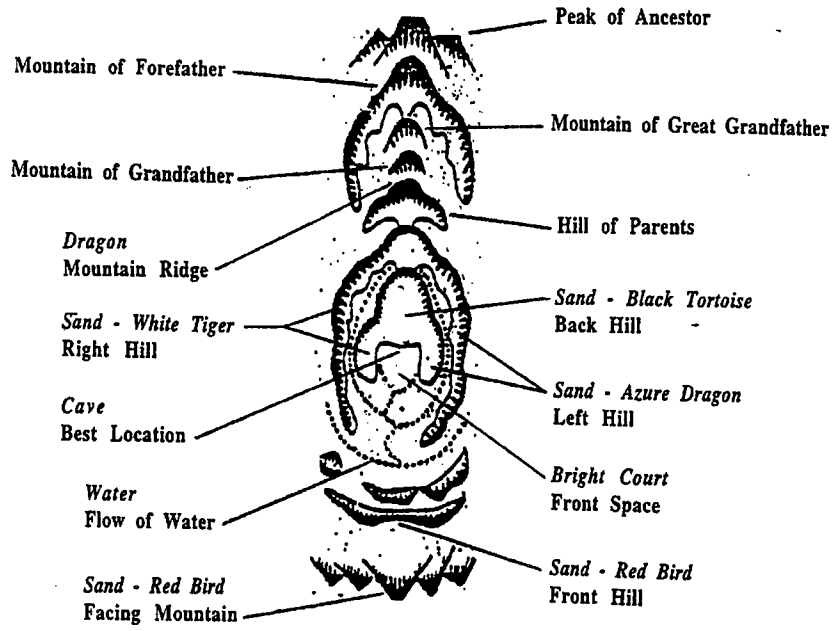


Figure 2 The Ideal Feng Shui Model in Ancient Feng Shui text

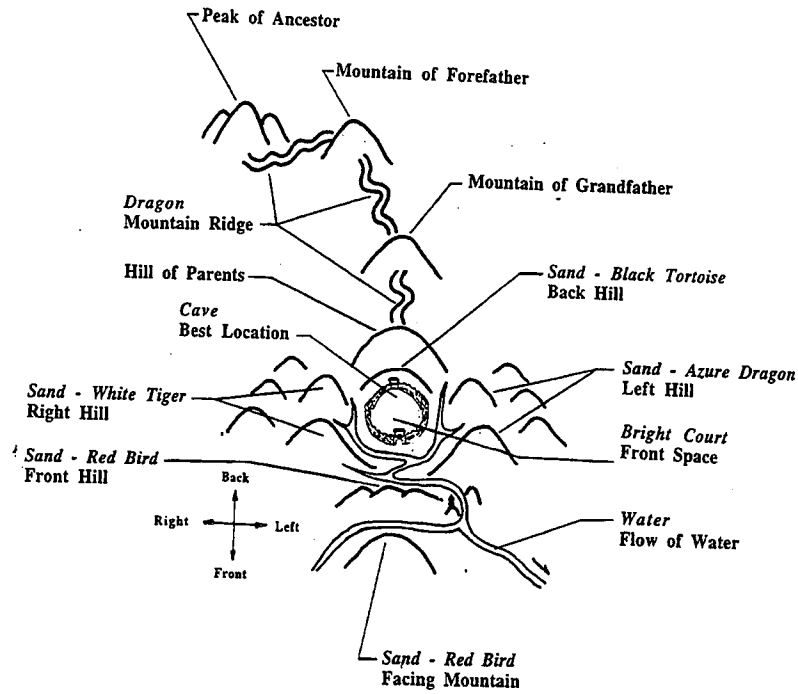


Figure 3 The Reproduced Ideal Feng Shui Model interpreted by Ching & Hung (1993:24)

Xu (1990:105) has conducted a survey of 56 sites of famous ancient graves from Chinese Feng Shui texts. The survey concluded that most graves conformed with the criteria of the five geographical factors as previous described. It found that 98% of the sites have enfolded by dragon and tiger hills; 89% have facing mountain and table hills; 100% have water (rivers or lakes) in front, 79% face between south and east. In ancient Feng Shui texts, a favourable grave site is also favourable for the siting of a house.

MAJOR CITIES IN THE WORLD

Most of the major cities in China are conformed to the criteria of the ideal Feng Shui model. The city of Beijing is described in ancient Feng Shui texts as the most favourable Feng Shui city because it meets all the criteria of the ideal Feng Shui Model (Yi, 1996:176). The city of Beijing has been established since Zhou dynasty (1122 B.C.) and has more than three thousand years' history. There are many other cities and towns in China were also described and documented as favourable Feng Shui cities, such as Nanjing, Xian, Luoyang, Suzhou, etc.

The theory of Form School not only applied to the cities in China, evidences are shown that it is also applicable in other cities in the world. Proudfoot (1994) explained how the principles of Feng Shui are applied to the design of Canberra city. Yi (1996:207) explained the city of Moscow and Washington D.C. also fulfilled the basic criteria of the Feng Shui model and described as "backed by a mountain and belted with water in front".

A survey of major cities in the world is conducted to demonstrate the application of the theory of Form School and the established Feng Shui model. It is hard to select which are the best cities in the world because it involves complex analysis of historical, social, economical and political factors. Also different perceptions and experiential factors vary from cities and countries as well. Therefore the selection process of best cities will be very arguable and the detail analysis will be out of scope of this study.

In order to simplify the situation, major cities selected in this survey are solely based on the population rather than other factors. This provided a clear selection criterion based on the "size" as the yardsticks of the "best" cities are hardly measurable. Although densely populated major cities are always associated with the problems of high living standards, traffic congestion, environmental

pollution, crime etc., it found that major cities are always the main focus of economical development and attraction for growth in population (Gao, 1991). There are many reasons behind why cities become highly populated. In general, major cities are the choice of majorities to reside and have the implication of highly inhabitable. Twenty of the highest populated major cities in the world are ranked (Sadik, 1996) and listed in Table 1.

These twenty major cities are surveyed according to the five geographical factors of the Form School theory and the basic criteria of the ideal Feng Shui model. Table 2 is outlined with considerations of these five geographical factors: dragon, sand, water, cave and direction as previously described. The survey is based on the information from atlas and Microsoft Encarta Virtual Globe 1998 Edition. For example, the location of Los Angeles is examined according to the features of the ideal Feng Shui model as shown in Figure 4. The overall results of the survey are displayed in Table 2 indicated whether or not the locations of the major cities are conformed to the basic criteria of the ideal Feng Shui model according to the five geographical factors.

Rank	City	Country	Population (in 1990) (million)
1	Tokyo	Japan	23.4
2	Mexico City	Mexico	22.9
3	New York	USA	21.8
4	Sao Paulo	Brazil	19.9
5	Shanghai	China	17.7
6	Beijing	China	15.3
7	Rio de Janeiro	Brazil	14.3
8	Los Angeles	USA	13.7
9	Bombay	India	12.0
10	Calcutta	India	11.9
11	Seoul	South Korea	11.8
12	Buenos Aires	Argentina	11.4
13	Jakarta	Indonesia	11.4
14	Paris	France	10.9
15	Osaka	Japan	10.7
16	Cairo	Egypt	10.0
17	London	UK	10.0
18	Bogota	Colombia	8.9
19	Chicago	USA	8.9
20	Madras	India	8.8

Table 1 Ranking of the Highest Population of Major Cities in the World

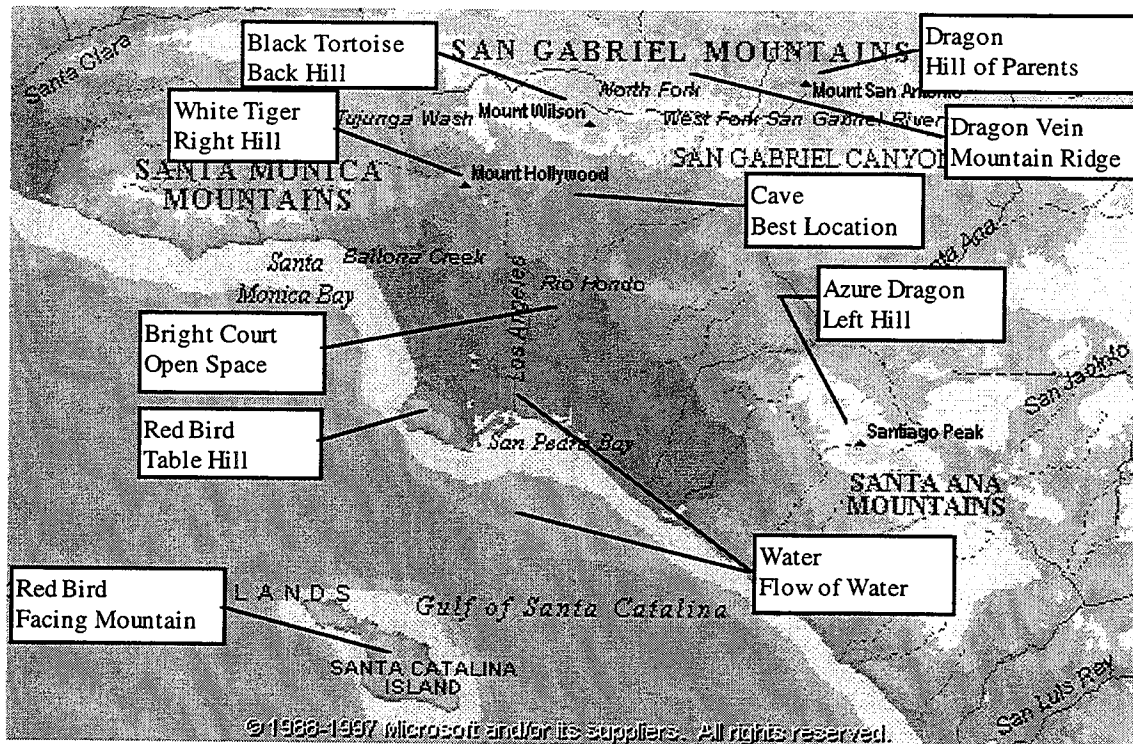


Figure 4 Location of Los Angeles illustrated with Features in the Ideal Feng Shui Model

City	Dragon	Sand		Water	Cave	Direction
	Dragon Vein/ Tortoise Hill	Dragon & Tiger Hills	Table Hill & Facing Mt	River, Lake or Sea	Bright Court	Orientation
Tokyo	Yes	Yes	Yes	Yes	Yes	S
Mexico City	Yes	Yes	Yes	Yes	Yes	NE
New York	Yes	Yes	Yes	Yes	Yes	SW
Sao Paulo	Yes	Yes	Yes	Yes	Yes	SE
Shanghai	No	No	Yes	Yes	Yes	NE
Beijing	Yes	Yes	Yes	Yes	Yes	SE
Rio de Janeiro	Yes	Yes	Yes	Yes	Yes	E
Los Angeles	Yes	Yes	Yes	Yes	Yes	S
Bombay	No	No	Yes	Yes	Yes	E
Calcutta	No	No	No	Yes	Yes	NW
Seoul	Yes	Yes	Yes	Yes	Yes	S
Buenos Aires	Yes	Yes	Yes	Yes	Yes	NE
Jakarta	Yes	Yes	No	Yes	Yes	N
Paris	Yes	Yes	Yes	Yes	Yes	S
Osaka	Yes	Yes	Yes	Yes	Yes	SW
Cairo	Yes	Yes	Yes	Yes	Yes	W
London	Yes	Yes	Yes	Yes	Yes	E
Bogota	Yes	Yes	Yes	Yes	Yes	NE
Chicago	Yes	Yes	No	Yes	Yes	NE
Madras	No	No	No	Yes	Yes	E

Table 2 Results of Major Cities conformed to the Five Geographical Factors of Form School theory

The result from the survey is very clear and consistent. Within the 20 selected cities, 80% have Dragon Veins and Tortoise Hills at the back; 80% have Dragon and Tiger hills enfolding the location; and 80% have Table Hills and Facing Mountains in front. There are 100% have Bright Courts and watercourses (rivers, lakes or seas) in front.

There are 16 cities in northern hemisphere, 25% face south, 25% face north-east, 19% face east, 13% face south-west, 6% face south-east, 6% face west, 6% face north-west and none of them face north.

Fourteen cities (70%) have the ideal composition of the five geographical factors of the Feng Shui model. In these 14 cities, one (Beijing) is in China and three (Tokyo, Seoul and Osaka) are in Asia. The rest ten cities are in the western countries, includes Mexico City, New York, Sao Paulo, Rio de Janeiro, Los Angeles, Buenos Aires, Paris, Cairo, London and Bogota.

The features of Table Hill and Facing Mountain are missing from Jakarta and Chicago. Four cities (Shanghai, Bombay, Calcutta and Madras) are not conformed to the Feng Shui model of Form School because they are located on the flat plain. According to Feng Shui texts, the basic criteria of Form School mainly apply to mountain area (He, 1990).

CONCLUSION

The Form School originated from China and developed in *Tang Dynasty* (618-906). The theory of the five geographical factors and the ideal Feng Shui model has been practiced widely in China and spread into Asian countries. The results of this survey provide evidence that the theory and practice are also applicable to other cities in the world. Although the sample size is not large enough to draw significant conclusion, the result of the survey clearly demonstrated that 14 out of the 20 selected most densely populated major cities in the world (70%) are conformed to the five geographical factors of the Form School theory and the ideal Feng Shui model.

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